AMERICAN MUSEUM NOVITATES

Number 814 Published by THE AMERICAN MUSEUM OF NATURAL HISTORY New York City August 1, 1935

59.82 (95)

RESULTS OF THE ARCHBOLD EXPEDITIONS. NO. 6

TWENTY-FOUR APPARENTLY UNDESCRIBED BIRDS FROM NEW GUINEA AND THE D'ENTRECASTEAUX ARCHIPELAGO

BY ERNST MAYR AND A. L. RAND

The following new forms have been discovered in the course of working out the collection made by the 1933–1934 Expedition to Papua. This expedition was financed, organized, and led by Mr. Richard Archbold. Other collections which were studied at the same time and in which some of the new forms were found are: (1) A collection made by Mr. J. T. Zimmer in 1920 and 1921, in southeast New Guinea; (2) a collection made by Rollo H. Beck in 1928 and 1929, at Samarai and in the Huon Peninsula of New Guinea; and (3) the collection made by the Whitney South Sea Expedition (Hannibal Hamlin) in 1928 and 1929, in southeast New Guinea and the D'Entrecasteaux Archipelago.

One new species is described. Three of the twenty-four subspecies are from the D'Entrecasteaux Archipelago; two are from the Huon Peninsula; eleven from the lowlands of south New Guinea; and eight are from southeast New Guinea. Four of the new southeast New Guinea subspecies are altitudinal representatives of lowland forms. Three of the south New Guinea races belong to species that have hitherto not been recorded for New Guinea.

Synoicus ypsilophorus mafulu, new subspecies

TYPE.—No. 419320, American Museum of Natural History; ♂ ad.; Mafulu, Central Division, Territory of Papua; October 19, 1933; Richard Archbold and A. L. Rand.

DIAGNOSIS.—This mid-mountain race is distinguished from the other New Guinea races by its size, which is intermediate between that of the alpine and the lowland forms. The male differs from the male of *plumbeus* in the much more heavily barred under parts and the more definitely patterned upper parts. On these, the gray areas are reduced, as are the rufous streaks, while the white shaft-streaks are wider and more numerous than in *plumbeus*.

The females differ from *plumbeus* in the darker, richer, olive-brown color, the increase of the size of the dark markings above, and in the increase of barring and the reduction of the vinaceous color of the under parts.

MEASUREMENTS.—Wing: ♂ ad. 90, 90, 91, 95, 95, 96, 97; ♀ ad. 89, 90, 91, 91.5,

93. (*plumbeus* has a wing, ♂ ad., 85–94.)

MATERIAL.—Mafulu: 3 ♂ ad., 4 ♀ ad.; October 19–November 4.
Bella Vista: 4 ♂ ad., 1 ♀ ad.; November 7–9.

DISTRIBUTION.—Probably restricted to the mid-mountain grasslands of southeast New Guinea from about 1000 to 2000 meters. Besides the above series, there are 5 adult males and 4 adult females in the Rothschild collection from Owgarra, Angabunga River, 6000–8000 feet, which obviously belong to this form.

REMARKS.—The sexual dimorphism in this subspecies is more pronounced than in the alpine form, but less so than in the lowland *plumbeus*. This new subspecies is more similar in size, pattern, and sexual dimorphism to *australis* of eastern Australia than it is to the lowland forms of New Guinea. It differs greatly from *australis* in the generally darker color and the absence of bright rufous tones.

Synoicus ypsilophorus monticola, new subspecies

TYPE.—No. 419334, American Museum of Natural History; ♂ ad.; Mt. Albert Edward, southwest slope, alt. 3680 meters, Territory of Papua; June 23, 1933; Richard Archbold and A. L. Rand.

DIAGNOSIS.—Differs from other New Guinea races in its larger size, and the reduction of the sexual dimorphism, the male being less different from the female.

From *mafulu* the male differs in being more coarsely marked and averaging more buffy brown below; above, it differs in being lighter, more brownish in general color, in having wider and more plentiful shaft stripes, in being more definitely and coarsely barred, and in lacking the gray streaks and black specklings on the feathers.

The female of *monticola* differs from that of *mafulu* in being brighter rufous above and below.

MEASUREMENTS.—Wing: ♂ ad. 104, 109, 109; ♀ ad. 102, 103.

MATERIAL.—Mt. Albert Edward, southwest slope: 3 ♂ ad., 1 ♀ ad.; June 20–23.
Murray Pass: 1 ♂ ad., 1 ♀ ad.; August 7.

DISTRIBUTION.—Known only from the Alpine zone on the Wharton Range, above 2800 meters.

REMARKS.—This form is most like *ypsilophorus* (Bosc) of Tasmania in both size and the reduction of the sexual dimorphism. It differs from it especially in the wider shaft-streaks, the more regular, uniform barring, the lack of gray streaks on the upper parts, and the more heavily barred under parts.

Though the mid-mountain form *mafulu* and the Alpine race *monticola* are altitudinal representatives of the lowland *plumbeus*, these mountain forms are more like some of the more southern representatives of the species, the effects of altitude on size, reduction of sexual dimorphism and pattern being equivalent to the effects of latitude.

Synoicus ypsilophorus dogwa, new subspecies

TYPE.—No. 421706, American Museum of Natural History; ♀ ad.; Dogwa, Oriomo River, Western Division, Territory of Papua; February 16, 1934; Richard Archbold and A. L. Rand.

DIAGNOSIS.—This race is closest to the two other lowland New Guinea races, *plumbeus* and *saturatior*, with the sexual dimorphism still more pronounced. The females differ from those of *plumbeus* in the heavier and more extensive barring below, in lacking the vinaceous tinge of the under parts of some specimens, in having the buffy ochraceous of the breast more evenly distributed over the under parts, in having the general color of the upper parts darker and more olive-brown, and the black spots larger. The males differ from males of *plumbeus* in the much darker, more clear gray and less patterned upper parts. Five males are entirely clear gray on the under parts, the other two approach a patterned bird from southeast New Guinea.

The females differ from females of *saturatior* in being much more buffy below, more evenly distributed over the under parts, instead of vinaceous restricted to the breast region, in being above generally darker, richer, olive-brown, not light grayish olive, in having larger black spots, and average wider shaft-streaks. Five of the males differ from the males of *saturatior* in being much darker gray above and clear gray below without rufous streaks on the under parts; the other two are more similar to the *saturatior* males.

MEASUREMENTS.—Wing: ♂ ad. 84, 85, 87, 88, 89, 91; ♀ ad. 82, 85, 86, 90, 91.

MATERIAL.—Dogwa: 6 ♂ ad., 4 ♀ ad.; February 15–25.
Wuroi: 1 ♂ ad., 1 ♀ ad.; January 20.

DISTRIBUTION.—Probably restricted to the lowlands of south New Guinea.

REMARKS.—For comparison we have 3 ♂ ad. and 7 ♀ ad. of *saturatior;* 4 ♂ ad. and 7 ♀ ad. of *plumbeus.*

Psittacella modesta huonensis, new subspecies

TYPE.—No. 266939, American Museum of Natural History; ♀ ad.; Sevia, Huon Peninsula, New Guinea; March 25, 1929; R. H. Beck.

DIAGNOSIS.—This form differs from *madaraszi* in the female by lacking the red apical tips to the feathers of the nape and hind neck, and in the reduction of the black barring above. The male is very similar to that of *madaraszi*, but tends to have crown and nape more yellowish, less brownish.

MEASUREMENTS.—Wing: ♂ 93, ♀ 92.

MATERIAL.—Zakaheme, alt. 4000 feet: 1 ♂ ad.; February 28 (Beck).
Sevia, alt. 5000 feet: 1 ♀ ad.; March 25 (Beck).

DISTRIBUTION.—Known only from the mountains of the Huon Peninsula.

Ninox novaeseelandiae pusilla, new subspecies

TYPE.—No. 421868, American Museum of Natural History; ♂ ad.; Dogwa, Oriomo River, Territory of Papua; February 16, 1934; Richard Archbold and A. L. Rand.

DIAGNOSIS.—This race differs from *macgillivrayi* Mathews, from Cape York, in its smaller size, the more reddish brown color of the upper parts and the reduction of white in the upper parts of the wing and scapulars.

MEASUREMENTS.—Wing, 197, 200; tail, 103, —.

Two male specimens of *macgillivrayi* measure: wing, 219, 220; tail, 120, 125.

MATERIAL.—Dogwa: 2 ♂ ad.; February 16, 17.

DISTRIBUTION.—Known only from the two specimens from south New Guinea.

REMARKS.—This is the first record for this species from New Guinea. *N. assimilis* belongs to a different species, *connivens*.

Aegotheles cristatus major, new subspecies

TYPE.—No. 421872, American Museum of Natural History; ♀; Dogwa, Oriomo River, Territory of Papua; February 27, 1934; Richard Archbold and A. L. Rand.

DIAGNOSIS.—This new subspecies is distinguished from the north Queensland *olivei* by the narrower nuchal band, the darker, more blotched dark markings on the breast, and by its larger size (wing, 149, against 135, 136). The type is molting out of immature plumage and the adult bird may be even larger.

MEASUREMENTS.—Wing, 149; tail, 127.

MATERIAL.—The type is unique.

DISTRIBUTION.—Known only from Dogwa in south New Guinea.

REMARKS.—The discovery of this race in south New Guinea, where *bennetti* also occurs, makes it necessary to consider the New Guinea forms *bennetti*, *affinis*, and *wiedenfeldi* as belonging to a different species for which *affinis* Salvadori is the oldest name.

A. c. major differs from *A. a. bennetti* in its much larger size, the rufous ear-coverts, the less densely vermiculated back, the more distinct markings on the outer webs of the remiges, the broader light bars and narrower dark bars in the tail, and by having the dark markings of the under part more restricted to the upper breast, and less regular, more blotched in pattern.

Lyncornis archboldi, new species

TYPE.—No. 419729, American Museum of Natural History; ♂ ad.; Mt. Tafa, west slope, altitude 2400 meters, Territory of Papua; September 23, 1933; Richard Archbold and A. L. Rand.

DESCRIPTION.—This species is most closely related to *L. papuensis* but differs from it in the generally bolder, coarser pattern; the breast lacks the fine barring of *papuensis*, the upper parts lack vermiculations, and there tend to be pronounced clear gray areas on the feathers of the upper parts. The tail feathers have light-colored tips.

MALE.—The feathers below are dusky blackish on the throat and breast with pale buffy rufous subterminal bands, widest toward the center, where they are sometimes divided by a narrow dark streak along the shaft. This gives a spotted, rather than a uniform barred appearance. The feathers of the abdomen have a broad somewhat triangular subterminal spot and usually a second narrow band of pale rufous, thus the abdomen appears nearly all pale buffy rufous irregularly mixed with blackish. The under tail-coverts are the color of the abdomen, with several blackish

bars. On each side of the neck is a white band reaching up to behind the ears; the chin is blackish with faint buffy markings. The sides of the head are black, with a few fine irregular marks of buffy rufous. The feathers along the sides of the crown are gray with a few indistinct fleckings of black and a more or less pronounced black streak in the center. These streaks are wider toward the middle of the head, which is black, some of the feathers with incomplete gray edges. The feathers of the nape are black with more or less gray edges; those of the interscapular area black with a broad gray streak down one (sometimes both) edge of the feather and a single small rufous spot at the end of the gray streak. The scapulars are gray, with a large black blotch at the tip of the feather and several small rufous spots near the tip. The gray basal part of the feather may be more or less barred with black and one web may be heavily marbled with dusky; a dark central shaft-streak is usually present. The lesser wing-coverts are blackish, lightly tipped with rufous, the others, black with a pair of subterminal rufous spots nearly meeting at the feather shaft. The lower back and upper tail-coverts are dusky, variegated with gray, and usually with a pair of subterminal rufous spots, one on each corner of the end of the feathers, especially on the rump; the longest upper tail-coverts are more gray, marked with black.

The outer pairs of tail feathers are largely black with about eight incomplete rufous bars on both webs. The central pair of tail feathers is missing in the male but the next pair has the incomplete bars rufous on the inner web, and gray, marbled with blackish on the outer web. All have a narrow terminal band of buffy rufous.

The primaries are black, unmarked; the secondaries, black with more or less rufous markings on the inner web and incomplete rufous edgings near the ends of the feathers on both webs; the tertials are gray, marked with broken bars and flecks of black, and with or without spots of rufous along the edge. The under wing-coverts are black with only a few faint rufous markings.

The two females are similar but with more rufous markings in the cheeks, more pronounced in one than the other, more conspicuous gray streaks on the sides of the top of the head, more gray in the hind neck; the black feathers of the center of the head are more or less edged with pale rufous which is largely worn off in some feathers. The rufous spots on the back are somewhat larger and more conspicuous; there are more definite rufous markings in the secondaries; the outer tail feathers have more (about 11) incomplete rufous bars. The central tail feathers (lacking in the male) are gray and black, with about eight incomplete irregular gray bars heavily marked with black, and wider though irregular black bars. Color of soft parts of female: iris dark, bill brownish black, feet pinkish dusky, nails blackish.

Due to the condition of the tails of these birds the shape is not easily determined, but apparently it is double rounded, the first, or outer, being shorter than the fourth; in the one female with a nearly complete tail the central tail feathers are nearly the same length as the outer feathers, the intermediate feathers being the longest. The second primary is longest, the first subequal to the third. There are no elongated tufts of feathers on the head.

MEASUREMENTS.—Wing: ♂ 212; ♀ 209, 212. Tail: ♂ ——; ♀ 145, 148.

MATERIAL.—Mt. Tafa, west slope: 1 ♂, 2 ♀; September 18, 23.

DISTRIBUTION.—Known only from the three specimens taken on Mt. Tafa at an altitude of 2400 meters.

REMARKS.—Many of the breast feathers have the tips worn off so that only a trace of white tip remains; the white color may be due to fading, though some of the feathers on the lower breast have nearly white spots.

Stresemann has examined Reichenow's *L. elegans* (1899, Orn. Monatsber., VII, p. 130—Ramu) and decided it is the young of *L. papuensis;* certainly from the description it cannot be *archboldi.* Ramsay's *Eurostopodus astrolabae* is probably *L. papuensis* as Salvadori has pointed out (1884, Ibis, p. 354). The description fits *papuensis* very much better than *archboldi.*

Pomatorhinus temporalis strepitans, new subspecies

TYPE.—No. 421974, American Museum of Natural History; ♂ ad.; Dogwa, Oriomo River, Western Division, Territory of Papua; February 24, 1934; Richard Archbold and A. L. Rand.

DIAGNOSIS.—Similar to *cornwalli* Mathews from Cape York but differing in its darker coloration. The crown stripe and hind neck are darker gray, the back, rump, and wing-coverts more blackish; flanks, abdomen, and thighs much darker, less tinged with sandy. In *cornwalli* the upper back differs only slightly from the hind neck and crown stripe; in *strepitans* the dark upper back contrasts more sharply with the gray of the hind neck and crown stripe.

MEASUREMENTS.—Wing: ♂ ad. 118; ♀ ad. 110, 111, 113, 115, 115.

MATERIAL.—Dogwa: 3 ♂ ad., 2 ♀ ad.; February 23, 24.
Wuroi: 4 ♂ ad., 4 ♀ ad.; January 19–February 11.

DISTRIBUTION.—South New Guinea.

REMARKS.—Hartert compared three New Guinea specimens of *P. temporalis* with Cape York birds (Bangs and Peters, 1926, Bull. Mus. Comp. Zoöl., Cambridge, LXVII, p. 430) and found no significant differences. Comparing our larger series of New Guinea birds with the Cape York material that Hartert had, which includes the type of *cornwalli,* we come to the conclusion that these forms can be separated.

Cinclosoma ajax alaris, new subspecies

TYPE.—No. 421959, American Museum of Natural History; ♀ ad.; Wuroi, Oriomo River, Western Division, Territory of Papua; January 24, 1934.

DIAGNOSIS.—Most closely resembles *goldiei* Ramsay of southeast New Guinea but differs in the female in being larger and much deeper rufous brown instead of olive-brown on the upper parts. The wing-coverts near the bend of the wing are brown, with subapical black and apical white marks, instead of largely black with fewer white spots.

MEASUREMENTS.—Wing, *goldiei:* ♂ ad. 103, 104; ♂ imm. 98, 98, 101; ♀ ad. 92.

MATERIAL.—*Goldiei:* 1 ♀ ad. Milne Bay, 3 ♂ immature Milne Bay, Orangerie Bay, and southeast New Guinea, and 2 ♂ ad. Milne Bay and China Straits. The type of *alaris* is unique.

DISTRIBUTION.—Probably south New Guinea.

REMARKS.—The race *ajax* from west New Guinea is quite different from both these forms, being larger, with very much darker brown upper parts, and black lores and postocular stripe (2 ♀ ad., 2 ♀ ad., Weyland Mountains, Stein coll.; wing: ♂ ad. 114, 114; ♀ ad. 109, 110. The type of *ajax*, a female, from Lobo Bay, has the lores and postocular stripe black (Temminck, 1835, 'Plan. Col.,' Pl. 573) as do the Weyland Mountain females.

Microeca leucophaea zimmeri, new subspecies

TYPE.—No. 295523, American Museum of Natural History; ♂ ad.; Port Moresby; July 11, 1920; J. T. Zimmer.

DIAGNOSIS.—The specimens from New Guinea appear to represent a resident race hitherto undescribed. It is similar to *pallida* but differs in having the upper parts tinged with greenish instead of ashy brown, the under parts tinged with yellowish instead of whitish, the upper parts distinctly darker, the sides of the breast darker gray, and in having the bill wider at the base.

MATERIAL.—Port Moresby: 2 ♂ ad., 2 ♀ ad.; June 20, July 11.

DISTRIBUTION.—Known only from the vicinity of Port Moresby.

REMARKS.—The June specimens are slightly worn, those from July show more wear.

These were taken in the savanna near Port Moresby.

Microeca leucops auricularis, new subspecies

TYPE.—No. 422051, American Museum of Natural History; ♂ ad.; Wuroi, Oriomo River, Territory of Papua; January 23, 1934; R. Archbold and A. L. Rand.

DIAGNOSIS.—Though we have but this single specimen from south New Guinea, it differs so markedly from the known races that it seems advisable to describe it. It is closest to *albifacies*, but differs in having a pure white throat (not whitish as in some specimens of *albifacies*) of about 10 mm. extent, sharply defined posteriorly and confluent with the white sides of the head, in having the ear-coverts white, tinged with blackish posteriorly and ventrally. There is also an extension of the white eye-ring backward as a short superciliary line; the crown is dark, more blackish gray, less olive, and the bill (in the dry skin) is yellow with only the tip of the maxilla black. The black of the forehead is separated from the base of the bill by a white forehead of about 3 mm. width.

MEASUREMENTS.—Wing: 79 mm.

DISTRIBUTION.—Probably restricted to south New Guinea.

REMARKS.—The specimen shows no wing molt, and was in breeding condition.

This was the only specimen seen at Wuroi. It was low in the ground cover of the forest, clinging to the sides of upright stems and scolding at me.

Phylloscopus trivirgatus hamlini, new subspecies

TYPE.—No. 224065, American Museum of Natural History; ♂ ad.; Goodenough Island, D'Entrecasteaux Archipelago; November 20, 1928; Hannibal Hamlin.

DIAGNOSIS.—Similar to *Phylloscopus trivirgatus giulianettii* Salvadori, but sides of the crown much darker, olivaceous black, not grayish green; under parts richer greenish yellow; green of back with a citrine tinge; edges of wing-feathers richer greenish; yellowish stripe across the middle of the crown more pronounced, blackish postocular stripe very conspicuous; chin whitish, but upper throat mixed with greenish yellow; superciliary stripe more yellow than whitish. Bill longer and stronger.

	WING	TAIL	CULMEN	TARSUS
1 male adult	58.0	40	13.5	21.5
1 female adult	53.5	37	13.5	21.0

DISTRIBUTION.—Goodenough Island.

REMARKS.—We name this striking new form in honor of Hannibal Hamlin whose explorations revealed for the first time the presence of a regular mountain avifauna on Goodenough Island.

Megalurus timoriensis alpinus, new subspecies

TYPE.—No. 420136, American Museum of Natural History; ♂ ad.; Mt. Albert Edward, southwest slope, altitude 3680 meters, Territory of Papua; July 2, 1933; Richard Archbold and A. L. Rand.

DIAGNOSIS.—This alpine race differs from *macrurus* in its average larger size [wing: ♂ ad. 70–76 (72.9) against 68–71.5 (69.3)], the breast, sides, and flanks being much grayer, lacking the buffy tinge of *macrurus*, the flanks having pronounced dark shaft-streaks, which are nearly lacking in *macrurus*, the upper parts having broader dark streaks extending farther down the back, and the rump being darker and more streaked.

MEASUREMENTS.—Wing: ♂ ad. 70, 70.5, 73, 74, 74, 76; ♀ ad. 67, 68, 69, 69, 69, 70, 70, 71.

MATERIAL.—Murray Pass: 3 ♂ ad., 4 ♀ ad.; July 19–August 8.
Mt. Albert Edward: 3 ♂ ad., 4 ♀ ad.; June 16–July 2.

DISTRIBUTION.—Known only from the Alpine zone on the Wharton Range, from 2800 to 3800 meters.

REMARKS.—Five adults of *macrurus* from the lowlands of southeast New Guinea (1 male Orangerie Bay, 2 males, 2 females Kumusi River) are quite different from the alpine birds. A large series from the mid-mountain grasslands, 1000 to 2000 meters, are somewhat different from either *macrurus* or *alpinus*, but are closest to *macrurus*. In size they fall within the limits of the lowland birds; the under parts are slightly darker but very similar to *macrurus*. On the upper parts the streaking tends to be coarser than in *macrurus* and to extend farther back, and the rump is slightly darker, and it differs from both the other forms in being more rufous. Though these mid-mountain birds differ somewhat

from both the lowland and the high altitude forms, they are much closer to *macrurus* of the lowlands with which they should be united, though there is a name, *punctatus* De Vis, available for them (1897, Ibis, p. 385).

Malurus alboscapulatus

The status of the different forms of *Malurus alboscapulatus* has long been imperfectly understood. With the present series of more than 200 specimens before us, it appears that with the recognition of several more races than have been admitted, the problem becomes clearer. Hartert had already come to the conclusion that explanations involving eclipse plumages and dimorphism were unnecessary (1930, Nov. Zool., XXXVI, p. 79) and we concur in this.

The adult males are always black, differing in the different races only in size. The female may be black, black with white under parts, or brownish and buffy with white under parts. These types are correlated with geographical distribution, and in connection with the size can be used in separating subspecies. The immature males resemble in general the females; the nestling plumages of both sexes are alike. The males, in some races at least, appear to have a dull black plumage between the juvenile and the fully adult plumage. Males in immature plumage, with skulls incompletely ossified, may breed. Immature birds usually have much longer tails than adults.

The following subspecies can be recognized.

M. a. alboscapulatus Meyer, Arfak Peninsula. The females are blackish above, with brown wings edged with grayish; under parts white with but little black along the sides of the body. The nestling plumage (1 ♀, Siwi) has a sooty black head, blackish brown back, brown wings without conspicuous light edges to the feathers; under parts all white with pale buffy flanks (4 ♂ ad., 1 ♂ imm., 3 ♀ ad., 2 ♀ imm.).

	Male Adult	Male Immature	Female Adult	Female Immature
Wing	50, 50, 51, 51	51	49, 49, 50	48, 48
Tail	40, 42, 40, 43	—	45, —, —	—, 46

M. a. aida Hartert, Weyland Mountains to Humboldt Bay. The females are all black, less glossy than the males, and with brown wings; the immature plumage is black with a little white in the chin (12 ♂, 7 ♀, Hollandia and Ifaar; 5 ♂, 4 ♀, vicinity of Weyland Mountains; 3 ♂, 5 ♀, Takar).

	Male Adult	Female Adult
Wing	48–51	45.5–49
Tail	36–40	39–42

M. a. tappenbecki Reichenow, from the Sepik region to Astrolabe Bay. Similar to *alboscapulatus* but smaller, blacker above, and with less light edgings to the wing

feathers (only two specimens). Wing: 48, ♂ ad.; 46, ♀ ad. Stresemann (1923, Arch. f. Natur., LXXXIX, Heft 8, p. 9) gives the following measurements for specimens obviously belonging to this form.

	Male	Female
Wing	(6) 44–48	(4) 46–47
Tail	(3) 34–36	46

M. a. moretoni De Vis, southeast New Guinea, on the north coast to Huon Peninsula, on the south coast to Port Moresby; similar to *aida* but smaller and the immature with more white on the under parts. One nestling from Huon Peninsula is all sooty black with only a white chin; three in nestling plumage from Samarai, Port Moresby, and Rona have white throats and the Samarai bird has a few white feathers in the abdomen; two Rona birds in immature plumage have considerable white in the abdomen as well as white throats. This increase in white on the under parts of the immature bird in the southwest part of the range may be an approach toward the next race. (Huon Peninsula, 2 ♂, 5 ♀; north coast of southeast New Guinea (Kumusi River, Baniara), 5 ♂, 5 ♀; Samarai, Milne Bay, 9 ♂, 7 ♀; Port Moresby, Rona, 11 ♂, 7 ♀.)

	Male Adult	Female
Wing	44–48	45.0–48
Tail	36–43	41.5–47

M. a. naimii Salvadori and D'Albertis, known only from a small area in southeast New Guinea, from Galley Reach to the mainland opposite Yule Islands. Similar to *tappenbecki* but blacker above, more black on the sides of the body, and with longer tail. (11 ♂, 7 ♀, Baroka, Kubuna, Hisiu.)

	Male Adult	Female Adult
Wing	45–47	45–47
Tail	38–41	43–47

Malurus alboscapulatus mafulu, new subspecies

Type.—No. 420175, American Museum of Natural History; ♂ ad.; Mafulu, altitude 1250 meters, Central Division, Territory of Papua; October 16, 1933, Richard Archbold and A. L. Rand.

Diagnosis.—Differs from *naimii* in its larger size (wing: ad. ♂ 48–51 against 45–47). This subspecies shows the same sexual and age differences as *naimii*, but the females and young of the new race average more black along the sides of the white under parts, more black on the breast, and show a reduction of white in the lores.

	Male Adult	Male Immature	Female Adult	Female Immature
Wing	48, 48, 48.5, 49, 49, 49, 49, 50, 50, 51	44, 47, 47, 47, 47, 49, 49.5	45, 46, 46, 47, 47, 48, 49, 49, 49, 49, 50.5	45, 45, 46, 46, 49
Tail	45, —, 45, 43, 43, 43, 49, 44, 44, 50	49, 56 (others molting)	—, —, 49, 44, 45, 48, 49, 48, —, —, 52	44, —, 49, 50, 54

MATERIAL.—Mafulu: 7 ♂ ad., 6 ♂ imm., 11 ♀, 3 ♀ imm., 2 ♀ fledglings; October 1–November 5.
Bella Vista: 1 ♂ ad., 1 ♂ imm., 2 ♂ fledglings, 1 ♀, 1 ♀ imm.; November 6–8.
Mt. Tafa, east slope: 1 ♂ ad.; May 17.
Ononge: 3 ♂ ad.; August 17, 19.
Ero Creek, 1600 meters: 1 sex (?) imm.; June 10.

DISTRIBUTION.—Probably restricted to the mid-mountain grasslands, between 1000 and 2000 meters, in southeast New Guinea.

REMARKS.—This is a mountain representative of *naimii*.

Malurus alboscapulatus dogwa, new subspecies

TYPE.—No. 422006, American Museum of Natural History; ♀ ad.; Wuroi, Oriomo River, Western Division, Territory of Papua; February 4, 1934; Richard Archbold and A. L. Rand.

DIAGNOSIS.—Distinguished from all the above races by the females and immatures having no black in the plumage. Closest to *lorentzi* but differs in its smaller size, particularly of the bill; the female and immature birds are much lighter, less blackish above, much browner on the back and rump, and much brighter buffy brown on the flanks.

	MALE ADULT	MALE IMMATURE	FEMALE
Wing	42, 42, 43, 43, 44, 44, 45, 45	41, 42, 42, 43, 44, 45	41, 41, 41, 41, 41, 41, 41, 41.5, 42, 42.5, 43
Tail	37, 39, 38, —, 38, 38, 38, 44	47, 47, 50, 52, 55	41, 43, 43, 44, 45, —, —, 44, 42, 45, 47

MATERIAL.—Wuroi: 5 ♂ ad., 2 ♂ imm., 7 ♀; January 18–February 11.
Dogwa: 3 ♂ ad., 4 ♂ imm., 4 ♀, 1 sex (?); February 17–26.

DISTRIBUTION.—South New Guinea, known only from the vicinity of the Oriomo River.

M. a lorentzi van Oort,[1] south New Guinea from the Noord River to the foot of the Snow Mountains (Setekwa and Oetakwa Rivers); closest to *dogwa* but differs in the female being darker above, more blackish on the head, duller on the flanks, and larger (Setekwa and Oetakwa Rivers, 3 ♂ ad., 4 ♂ imm., 2 ♀).

	MALE ADULT	MALE IMMATURE	FEMALE
Wing	47, 50, 51	47, 48, 48, 48	46, 50
Tail	42, 43, 44	50, 51, 51	48, 47

Paradisaea apoda salvadorii, new subspecies

TYPE.—No. 330366, American Museum of Natural History; ♂ ad.; Vanumai, Central Division, Territory of Papua; June 11, 1929; Hannibal Hamlin.

DIAGNOSIS.—Closely related to *raggiana* but the male is distinguished by the completely brown back, lacking the yellow tips to the feathers of the upper back, and by the more bronzy green, less blue-green gloss of the throat patch. The single fe-

[1] Type series in the Leiden Museum examined by Mayr.

male for comparison differs from a female of *raggiana*, taken at Annie Inlet, in lacking the yellow on the upper back and in having much less yellow, which is also duller, on the back of the head and neck, the black of the forehead extending farther back. *P. a. raggiana* is intermediate between *salvadorii* and *intermedia* De Vis.

MEASUREMENTS.—Wing: ♂ ad. 180, 183, 186, 187, 193; ♂ imm. 182, 184, 189.

MATERIAL.—Wuroi: 2 ♂ ad., 1 ♂ imm., 1 ♀; January 8–February 4.
Vanumai: 2 ♂ ad.; June 11, 13 (Hamlin).
Deva Deva: 1 ♂ ad.; May 25 (Hamlin).
Veimauri: 1 ♂ imm.; August 17 (Zimmer).
Cloudy Bay: 1 ♂ imm.; January 6 (Zimmer).

DISTRIBUTION.—South coast of southeast New Guinea from Wuroi, west of the Fly River to Cloudy Bay, inland to 1250 meters (seen commonly at Mafulu).

REMARKS.—The name *raggiana* has been used for the form of *apoda* occupying the area between the Fly River and Milne Bay. From a study of our material, however, it appears that this is not a uniform population and can be divided into two races. The males from Milne Bay and Orangerie Bay (7 specimens) are similar to each other and differ from the rest of the population in the characters given above. The specimens from Orangerie Bay have somewhat less yellow on the upper back than Milne Bay birds but are closest to them.

The type specimen is a trade skin lacking the back, but since other specimens from the type locality, Orangerie Bay, have the characters of the Milne Bay population, the name *raggiana* must be restricted to the population in the area between Milne Bay and Orangerie Bay, leaving the form from the rest of the south coast of southeast New Guinea without a name.

Myzomela rosenbergi longirostris, new subspecies

TYPE.—No. 224215, American Museum of Natural History; ♂ ad.; Good-enough Island, D'Entrecasteaux Archipelago; November 23, 1928; Hannibal Hamlin.

DIAGNOSIS.—This very distinct form is characterized by its much larger bill, averaging about five millimeters longer than in the New Guinea form; this character is just as distinct in the immature as in the single adult bird, in the present material. The wing and tail are also somewhat larger.

The first year plumage of the male differs from that of *rosenbergi* in being more grayish, less warm brown below, and in being more uniform olive-brown above, less blackish, spotted with warm brown on the back. The adult males are similarly colored.

	MALE ADULT	MALE IMMATURE	FEMALE IMMATURE
Wing	69	62, 62, 63, 63.5	57
Tail	46	42, 43, 41, 42	38
Bill	24	24, 25, 24, 24	22

MATERIAL.—Goodenough Island: 1 ♂ ad., 4 ♂ imm., 1 ♀ imm.; November 22, 23 (Hamlin).

DISTRIBUTION.—Goodenough Island, D'Entrecasteaux Archipelago.

Toxorhamphus iliolophus flavus, new subspecies

TYPE.—No. 422311, American Museum of Natural History; ♂ ad.; Wuroi, Oriomo River, Western Division, Territory of Papua; February 7, 1934; Richard Archbold and A. L. Rand.

DIAGNOSIS.—Similar to *Toxorhamphus iliolophus iliolophus*, but under parts and flanks conspicuously yellower.

WING MEASUREMENTS

	South New Guinea (Wuroi)	Southeast New Guinea
Male	64, 64, 66, 67	66, 68, 68, 68, 70
Female	58, 61	62, 63, 64, 64

MATERIAL.—Wuroi: 4 ♂, 2 ♀; January 25–February 7.
Kubuna: 1 ♀; December 1.
Mafulu: 5 ♂, 3 ♀, 1 sex (?); October 1–November 13.

DISTRIBUTION.—South and southeast New Guinea; from sea level to 1250 meters.

REMARKS.—The birds from southeast New Guinea are not exactly the same as the south New Guinea specimens, being slightly larger and somewhat darker green on the back, but they agree with them in the richer colored under parts and are preferably grouped with them.

Hartert (1930, Nov. Zool., XXXVI, p. 44) has already suggested that this species was divisible into three races, but he lacked adequate material on which to separate them. Mayr (1931, Mitt. Zool. Mus. Berlin, XVII, p. 656) has given additional notes on the geographical variation in this species. From the survey of the present material (4 Arfak Birds, 3 Cyclop birds (Mayr coll.), 2 Madang birds, and 6 from the Huon Peninsula (Beck coll.), in addition to the above listed material) there appear to be even more "populations" distinguishable by color differences. However, these populations may be grouped into three subspecies, and the following is perhaps the most satisfactory arrangement.

1.—*T. i. affinis* (Salvadori), from the Arfak, distinguished by its dark gray, not greenish crown, dull grayish green back, grayish under parts, and pale flanks.

2.—*T. i. iliolophus* (Salvadori), from Miosnom, Jobi, Cyclop Mountains, (Snow Mountains?), Sepik Mountains, and the Huon Peninsula, characterized by its greenish crown and back, and by its slightly yellowish under parts and flanks. The birds from the Cyclop, which Mayr compared and found identical with Miosnom and Jobi birds, have the upper parts much greener than the grayish green birds from the Huon Peninsula. Madang birds are somewhat intermediate. This does not agree with

the observations of Stresemann and Paludan (1932, Nov. Zool., XXXVIII, p. 221), who state that Jobi birds are identical with Huon Peninsula (Junzaing) specimens.

3.—*T. i. flavus* Mayr and Rand, from south and from southeast New Guinea. These two populations are not identical, but both are distinguishable from the others by the more richly colored under parts, especially the flanks. The south New Guinea birds have the greenish upper parts very similar to *iliolophus* from the Cyclop, much greener than those from the Huon Peninsula; southeast New Guinea birds with their darker grayish green backs are little greener than *iliolophus* from the Huon Peninsula.

There are two other races of *iliolophus:*

4.—*T. i. cinerascens* Stresemann and Paludan (1932, Nov. Zool., XXXVIII, p. 144) from Waigeu; the palest race, distinguished from 1 by the whitish, less grayish under parts, and the purer ash-gray, less olive-colored edges to the crown feathers.

5.—*T. i. fergussonis* (Hartert), from the D'Entrecasteaux Archipelago (Goodenough, Fergusson, and Normanby Islands, 6 specimens, Hamlin coll.), which approaches *flava* from southeast New Guinea but is easily distinguished from all the other races by its much longer bill and its longer wing. Wing: ♂ 72, 75; ♀ 65, 66, 67, 72.

Toxorhamphus poliopterus septentrionalis, new subspecies

TYPE.—No. 267876, American Museum of Natural History; ♂ ad.; Huambon [= Hompua], altitude 3000 feet, Saruwaged Mountains, Huon Peninsula, New Guinea; February 12, 1929; R. H. Beck.

DIAGNOSIS.—Mayr (1931, Mitt. Zool. Mus. Berlin, XVII, p. 657) has already pointed out that Huon Peninsula birds differ from those from southeast New Guinea in having a shorter bill and a less pure gray, more greenish crown. The present material supports these findings. In addition the Huon Peninsula birds have a slightly longer wing, though the bill is shorter.

	MALE ADULT	FEMALE ADULT	FEMALE IMMATURE
Wing	71	63.0, 64.0	63.0
Bill	30	27.5, 27.5	27.5
Mayr's measurements (*loc. cit.*) of his Huon Peninsula material[1]			
Wing	69, 71, 72	62, 62, 63	

Stresemann (1923, Arch. f. Natur., LXXXIX, Heft 7, p. 53) gives the wing of a female from Schraderberg as 65.

A comparison of the wing-bill[2] indices of the southeast New Guinea and Beck's Huon Peninsula material helps to bring out the difference between these two forms.

[1] We found that the measurement of the culmen, measured from the base, brought out the difference in the size of the bills better than the method used in 1931, so, in the present comparison, we are unable to use the measurements recorded then.

[2] Wing-bill index $= \frac{\text{bill} \times 100}{\text{wing}}$.

	Southeast New Guinea	Huon Peninsula
Adult Male	48.6, 49.3	42.3
Adult Female	45.2, 45.9, 47.5	42.9, 43.7

MATERIAL.—Hompua: 1 ♂ ad., 1 ♀ imm.; April 9, Feb. 12 (Beck).
Zakaheme: 1 ♀ ad.; April 8 (Beck).
Sevia: 1 ♀ ad.; March 18 (Beck).

DISTRIBUTION.—Huon Peninsula to the Sepik Mountains (Schraderberg).

Xanthotis polygramma candidior, new subspecies

TYPE.—No. 422322, American Museum of Natural History; ♀ ad.; Wuroi, Oriomo River, Western Division, Territory of Papua; February 7, 1934; Richard Archbold and A. L. Rand.

DIAGNOSIS.—This form is closest to *lophotis* but differs in having the black spots in the centers of the back feathers less distinct, and in the finer streakings and smaller triangular spots of the under parts, giving the under parts a whiter appearance (whence the name "*candidior*").

MEASUREMENTS.—Wing: 69, 71.

MATERIAL.—Wuroi: 2 ♀ ad.; January 27, February 7.

DISTRIBUTION.—South New Guinea.

REMARKS.—One specimen is molting its wing, the other is not; neither showed any enlargement of the ovary.

Meliphaga virescens intermedia, new subspecies

TYPE.—No. 330252, American Museum of Natural History; Samarai Island, Papua; adult ♂; July 5, 1929; Hannibal Hamlin.

DIAGNOSIS.—This form is intermediate in color between the richly colored *versicolor* of south New Guinea and the pale *sonoroides* of north New Guinea. It differs from *versicolor* in the paler yellow under parts, the paler inner edging of the remiges, and the much more grayish upper parts. It differs from *sonoroides* in the yellower under parts and the darker, more greenish, less grayish upper parts.

MEASUREMENTS.—Wing: ♂ ad. 106, 107, 107; ♂ imm. 92, 99, 104; ♀ ad. 98, 104; ♀ imm. 92.

MATERIAL.—Samarai Island: 2 ♂ ad., 1 ♂ imm., 2 ♀ ad.; July 5 (Hamlin).
Doini Island: 1 ♂ ad., 2 ♂ imm., 1 ♀ imm.; November 16–December 2 (Zimmer).

DISTRIBUTION.—Probably restricted to extreme southeast New Guinea and the nearby islands. We have typical *sonoroides* from the Huon Gulf and Fergusson Island.

Philemon citreogularis papuensis, new subspecies

TYPE.—No. 422372, American Museum of Natural History; ♀ ad.; Dogwa, Oriomo River, Territory of Papua; February 25, 1934; Richard Archbold and A. L. Rand.

DIAGNOSIS.—This is distinguished from *johnstoni* of north Queensland by its smaller size (females 118 and 120, against 128–130) and its generally darker color

above and below. The white spots on the dark breast stand out in contrast much more than in *johnstoni*.

MEASUREMENTS.—Wing: ♂ ad. 124, 124, 127; ♀ ad. 118, 120; bill: 31.5, 34, 31; ♀ 30, 31.5. Four females from north Queensland measure: wing, 128, 129, 130, 130; bill, 30, 30, 30.5, 32.

MATERIAL.—Dogwa: 3 ♂ ad., 2 ♀ ad.; February 19–28.

DISTRIBUTION.—Probably occurs only in south New Guinea.

REMARKS.—Though members of this genus fade very badly, the present New Guinea series is not in fresh plumage, and, compared with somewhat worn specimens of *johnstoni*, the difference in color is so marked that it seems it will prove constant. Some of the Australian specimens of this species, as well as some of the New Guinea birds, have yellow in the chin and throat. The significance of this is not clear; it appears not to be correlated with age or sex.

All but one of the present series are molting.

This is the first record of this species for New Guinea.

Zosterops fuscicapilla crookshanki, new subspecies

TYPE.—No. 222112, American Museum of Natural History; ♂ ad.; Goodenough Island, D'Entrecasteaux Archipelago; November 20, 1928; Hannibal Hamlin.

DIAGNOSIS.—Very different from *fuscicapilla* Salvadori, forehead and crown being olive as the back, not blackish; small dusky spot on the lores present, upper cheeks also partly dusky; white eye-ring very wide, but not quite closed on the anterior margin; rump not lighter and more yellow than the back, upper tail-coverts with a brownish wash; inner edges of wing-feathers (on the underside of the wing) not pure white but with a buffy tinge; on the under parts very similar to *fuscicapilla*, but less yellowish; flanks and under tail-coverts more strongly washed with olivaceous; tail less blackish, outer edges of tail-feathers olivaceous; olivaceous edges on primary-coverts and upper wing-coverts broader; larger.

MEASUREMENTS.—Two female adults: wing, 60.5, 60.5; tail, 41, 43.5; culmen, 15, 15; tarsus, 17, 17.5.

DISTRIBUTION.—Goodenough Island, D'Entrecasteaux Archipelago.

REMARKS.—We name this new race in honor of Lt. Commander Robert Crookshank, captain of the "France," who did so much to make the expedition a success.

Zosterops novaeguineae wuroi, new subspecies

TYPE.—No. 422406, American Museum of Natural History; ♂ ad.; Wuroi, Oriomo River, Western Division, Territory of Papua; February 7, 1934; Richard Archbold and A. L. Rand.

DIAGNOSIS.—This new form differs from the other three races of *novaeguineae* in having the throat and under tail-coverts more golden yellow, in having the upper

parts brighter more citrine green, and in having a wider white eye-ring. There is also slightly less black below the eye and the flanks are rather clear gray.

MEASUREMENTS.—Wing, ♂ ad. (type) 55; ♂ imm. 54; ♀ (?) imm. 53.

MATERIAL.—Three specimens from Wuroi, January 25, February 7.

DISTRIBUTION.—Probably the lowland country of south New Guinea. These are the first specimens of the species to be collected in this area. The other races are mountain birds.

REMARKS.—The adult male was not breeding. All three specimens are molting.

Thus we have in New Guinea four races:

1.—*Zosterops novaeguineae novaeguineae* Salvadori; Aru Islands and Arfak; wing, 53, 55, 55 (three Arfak specimens). Hartert (1930, Nov. Zool., XXXVI, p. 53) suggests that the Aru bird may be darker than the Arfak ones.

2.—*Zosterops n. oreophila* Mayr; Huon Peninsula; characterized by the darker upper parts and wider eye-ring, less gray on the sides of chest and flanks, a more extensive yellow throat, and larger size; wing, 60, 63, 64, 63, 64.

3.—*Zosterops n. crissalis* Sharpe; southeast New Guinea; distinguished from 2 by the lighter green of the upper parts, the slightly richer yellow of the throat and under tail-coverts, larger eye-ring, and more dusky flanks. It is also slightly smaller. This form is distinguished from 1 by larger size, slightly lighter green of the upper parts and richer yellow of throat and under tail-coverts, more dusky brownish flanks and larger eye-ring. The yellow of the throat is also slightly more extensive.

4.—*Zosterops n. wuroi*, new subspecies; lowlands of south New Guinea.

The brownish gray flanks of *Z. novaeguineae*, most pronounced in *crissalis*, also pronounced but clearer gray in *wuroi*, and less pronounced in the other two races, indicate a slight approach toward the *lateralis* group; but *lateralis* tends to have a gray back; *japonica* also has the same brownish flanks.